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INFORMATION REPORT

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COUNTRY USSR

SUBJECT Comment on Ties, Rails, Fuel, Personnel, and Operating
and Working Conditions on USSR RailroadsPLACE ACQUIRED
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1. On all the rail lines I ever saw in the USSR (European and trans-Siberian lines) the ties were creosoted wood. I am sure that I never saw steel or concrete ties in the USSR -- even on lines where unusually heavy loads were being carried. Every line had special creosoting plants located at specified intervals. I recall that there were two creosoting plants on the line between Leningrad and Moscow. The ties were made of soft wood -- frequently of pine. Soft wood was used in preference to hard wood because of its shock absorbing qualities. The ties were not pre-bored. There was a metal plate which fitted under the rail (between the rail and the tie) and the plate had two holes in it for the large nails which held the rail to the tie.
2. I do not know what the average life of a tie was on the Soviet railroads, but it must have varied quite a bit. On the main lines (such as Moscow-Leningrad) there was a railroad worker stationed along each kilometer of track, whose sole job it was to inspect the track. He looked for cracks in the rails, examined ties and made sure the nails holding the rails down were secure. When the ties reached a certain degree of softness he had them taken off the main line and transferred to a secondary line. The worker who inspected the track lived on railroad property somewhere along the kilometer he was responsible for, and he made trips back and forth along his assigned piece of track from daylight until dark. On the main lines where there were double tracks, he was responsible for inspecting both tracks for one kilometer.
3. There were different grades of ties on the railroads -- they differed both in size and quality -- and the type used depended on the maximum weight carried on the line. On main lines the ties were heavier and closer together because they carried heavier loads. Light rails were used in the far north over frozen

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earth and lighter ties were also used there.

4. I do not remember the specific dimensions of the rails, but I do remember that they were classified as "A-1", "A-2", etc, according to the maximum weight they could carry. The "A-1" rail could support about 16 tons per axle. This rail was used on the main lines. "A-2" rails could support 12 to 14 tons per axle, and were used on secondary lines, or lines where there was less traffic. There were classifications below "A-2" for rails used on lines going into factories, for lumber lines, and in the western part of the USSR where the lines ran to the peat bogs.
5. As I recall, re-rolled rails were used only in case of a shortage of rails.
6. Shortly before World War II the "B"-type locomotive (1-6-0), with a steam "over-heater" (literal translation of a device to "dry out" the steam in order to increase efficiency), on a freight train made up of 115 cars of 16 tons each, would use one and one-half tons of average coal for a 75 to 80 km run. This would be a train of 115 thousand pud (one pud is equal to 16 kg). The "steam over-heater" which increased the efficiency for the locomotive, directly affected the consumption of fuel.
7. The amount of passenger traffic in the USSR was comparatively small. There was always a shortage of passenger trains, more of a demand for them than there were trains available. The percentage of passenger trains was always low compared to the freight traffic.
8. There was always an attempt to have rail traffic use local fuel where it was possible to do so. In the north only the passenger trains burned oil. Diesel was used on fast corridor trains and on lines where there were steep climbs. On the lines in the Leningrad area and the Lake Baikal area a substance called "slanzy" (not peat) was burned in the locomotives. This was a form of earth which burned easily, and use of this material saved wood. This material was also found in the region of Kingessep, Estonia. Use of "slanzy" required a modification of the burners on locomotives because it produced more ashes than wood did. On the European plains this type of fuel was widely used. The suburban lines around Moscow and other cities ran on electricity.
9. On a typical long-distance corridor passenger train between Moscow and Leningrad, a distance of 609 km, two locomotives would be used (one would take the train half way and another one would pick it up and take it the rest of the way). If the locomotives happened to burn coal or local fuel there would be a crew of three on each of them. If the locomotives were diesel each one would have a crew of two. Assuming that there would be 13 or 14 cars on the train (four-axle cars) there would be a crew of five men working on the cars. This was the number of trainmen operating the trains when I left the USSR (1943) and I assume that there are still about the same number.
10. On a typical freight train there would be a crew of three on the locomotive. The maximum number of cars on a freight train was 115 small cars, but the average size was 80 or 85 cars (of varying sizes). There were three conductors on an average freight train -- one of them, the main conductor, was in one of the first cars; one was in a middle car; and the third was in the last car and was responsible for giving the signals, etc. An additional man was sometimes added to the train crew for special loads.
11. Railroad personnel had a basic schedule of eight hours per day, six days per week. Employees were permitted to work overtime only when there was a shortage of personnel. Ordinarily when an employee worked for a certain period of time he was off-duty for double the length of time he worked. Thus if he worked an eight-hour day he would be off for 16 hours. If a trainman worked for 24 hours (as in the case of the Moscow-Leningrad run where he would be 10 or 11 hours out and the same number of hours on the return trip, with one or two additional hours for finishing up his business at the end of the trip) he would have 48 hours off. When an employee worked overtime, however, he might work 10 hours

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and be paid overtime for the extra two hours, but he would have only 16 hours off. In other words he did not receive compensatory time off for working overtime. On holidays the railroad personnel who worked drew either double pay or double relief time. It was possible for employees to forego their earned vacation time and be paid for it instead. Money they received for unused vacation time was not taxable.

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755.223	N
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